

ABSTRACT

An access node run as a packet switching apparatus enables IP connection services for a plurality of access methods; e.g., relatively low-speed IP connection, high-speed IP connection, and mobile network IP connection. By using this apparatus of the present invention, cost can be reduced and upgrading to advanced access networks and access services is easily carried out. Provision of the above access nodes implements upgrade-type network services common for diverse protocols. Each access node retains a pathfinding table to which input port, input tunnel identifier and input session identifier entries in a set are registered per session. When routing a packet, by looking up the set of these entries matching with the packet, the associated output port, output tunnel identifier, and output session identifier are obtained. After processing for the packet, appropriate for one of the plurality of access methods and network services, the node forwards the packet over the routed path.